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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,365	10/10/2003	See Leang Chin	6013-121 US JA/AD/mb	7814
20988	7590	05/16/2006	EXAMINER	
OGILVY RENAULT LLP 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A2Y3 CANADA			NGUYEN, TU T	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/682,365	CHIN, SEE LEANG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tu T. Nguyen	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/22/2004</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 5-6, the claimed “desired range” is not clear. it is not clear what range applicant want to refer to (frequency range or power range).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rairoux et al (“Remote sensing of the atmosphere using ultrashort laser pulses”, Applied Physics B Laser and Optics, 573-580 (2000)) in view of McGrew (2003/0123051).

With respect to claim 1, Rairoux discloses a method for sensing molecule in a substantially transparent medium. The method comprises: transmitting high-power (laser system, fig 2), ultra-short laser pulses into the medium (abstract) so as to

generate filaments (page 574, second paragraph) detecting said filament (spectrometer, fig 2); and analyzing said signal to identify said molecule (page 573, column 1, second paragraph).

Rairous does not explicitly disclose detecting amplified spontaneous fluorescence signal. McGrew discloses system for detecting particles (paragraph [0066]). The system comprises detecting fluorescence signal, wherein the fluorescence signal amplified (paragraph [0003] discloses how to enhance (amplify) the fluorescence signal) by stimulated emission (paragraph [0005], optimally shaped pulse). It would have been obvious to modify Rairous with McGrew for detecting the amplified fluorescence signal in order to make the system more accurate.

McGrew does not disclose detecting the fluorescence signal propagating along an axis of the filament. Since McGrew discloses detecting the scattering signal 315 (fig 3) (propagating along a plurality of axis) from the sample, it would have been obvious a desire choice to modify McGrew to detect the signal propagating only along an axis of said filament for measuring different characteristics of the sample.

With respect to claim 2, it would have been obvious to modify McGrew to detect the signal propagating different axis for measuring different characteristics of the sample.

With respect to claims 3-4, Rairous discloses transmitting terawatt femtosecond laser pulses (fig 2).

With respect to claim 5, Rairous discloses detecting the signal over a desired time interval ( $\Delta t$  in equation 1, page 574) corresponding to a desired range resolution (page 575, second column).

With respect to claim 6, using a shutter for selecting a desired time would have been known in the camera art. It would have been obvious to modify Rairous's spectrometer with the claimed shutter to facilitate the measuring.

With respect to claims 7,9, Rairous discloses transmitting the pulses through the atmosphere (or the sky) (page 574, second paragraph). Rairous does not explicitly disclose transmitting the pulse from the ground. It would have been obvious to modify Rairous by transmitting the pulse from the ground to make the system more stable.

With respect to claim 8, Rairous discloses detecting nitrogen (page 579, second column, 3<sup>rd</sup> paragraph).

With respect to claim 10, Rairous does not explicitly disclose the claimed molecule group. However, it would have been obvious to modify Rairous to detecting different types of gas for different intended uses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen  
Primary Examiner  
Art Unit 2877